UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
CARIBBEAN ENVIRONMENTAL PROTECTION DIVISION
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SEP 15 2016

CERTIFIED MAIL /RETURN RECEIPT REQUESTED
7009 2250 0000 9163 1296

Mr. Alvin E. Crespo, Director
Environmental Health and Safety
Bristol-Myers Squibb Manufacturing Company
Humacao Operations
P.O. Box 609
Humacao, Puerto Rico, 00792-1255

Re: Comments to the February 2016 Release Assessment Report for the Bristol-Myers Squibb Manufacturing Company located in Humacao, Puerto Rico
EPA ID Number: PRD 090021056

Dear Mr Crespo:

The United States Environmental Protection Agency-Region 2 (EPA) has reviewed the February 2016 Release Assessment Report (RAR) for the Bristol-Myers Squibb Manufacturing Company (BMSMC) in Humacao, Puerto Rico. As you know, in order to expedite its investigation, BMSMC initiated its sampling program prior to EPA's review and approval of its RAR and sampling plans. BMSMC and EPA have had numerous meetings regarding BMSMC's intent to move forward expeditiously, and EPA has provided some comments in advance of work being performed. BMSMC has agreed however to incorporate any additional EPA's comments into its RAR and sampling plans, as well as to perform any additional work deemed necessary by EPA.

EPA's comments on the RAR are attached. EPA is sending BMSMC comments on its March 2016 (Phase 1- on site Phase 1) and June 2016 (Phase 2A – off site) Sampling and Analysis Plans under separate cover; however because the RAR and SAPs are related, there may be some overlap in these comments.

Please provide a revised RAR, or a supplemental submission, within 30 days of receipt of this letter. If you have any questions regarding this correspondence, please contact Socorro Martinez of my staff at (787) 977-5886 or via email at martinez.socorro@epa.gov.

Sincerely,

Carmen Guerrero, Director
Caribbean Environmental Protection Division

cc: Nilda Sanchez Santiago, PREQB
Amy Chester, EPA, Region 2

I. GENERAL COMMENTS

1. Although the current use of the BMSMC facility is industrial/commercial and a future deed restriction may ensure that remains the case, the soil and groundwater data also should be compared to the residential RSLs because of the potential for off-site migration of groundwater contamination. Soil and groundwater contamination with the potential for off-site impacts (e.g., groundwater contamination located immediately adjacent to the downgradient site perimeter, soil contamination above impact to groundwater levels at the downgradient site boundary, contamination associated with potential vapor intrusion into off-site residences) must be characterized to residential RSLs. Revise the RAR accordingly, and ensure that the draft SAP for each phase of investigation reflects this important risk consideration.

2. According to Footnote 4 on page 7, detected compounds for which no EPA screening levels are available will be carried forward into the SAP for further investigation and evaluation. This is an important point which clarifies the scope of the follow-up field investigation effort and deserves more than a minor mention in a footnote. Expand Section 5 of the RAR to include, and expand on this footnote, and include a list of all detected compounds for which no screening levels are available.

3. The RAR only vaguely describes the issue that prompted the preliminary reevaluation of historic sampling results, the process utilized for the review, and recommendations to avoid these issues in the future. Expand the RAR to include more detail such that the original failings are clearly described, a robust root cause analysis is provided, and recommendations to avoid similar issues in the future.

4. The RA does not currently include figures showing sampling results for the new potential COCs. However, a spatial representation of the locations where the maximum detected concentrations were found (relative to SWMUs and BMSMC facility property boundaries) would shed light on potential source areas and contaminant delineation. Expand the RAR to include figures showing the location of maximum detected concentrations in each medium for each detected COC.

5. Attachments A and B present a summary of detections identified in the groundwater data for Building 5 and the Former Tank Farm area. This information should be expanded to include a summary of detections in each data set (groundwater, soil, soil gas, and indoor air). This information should then be incorporated into the RAR per se, rather than provided as an electronic attachments to the RAR copies.

II. SPECIFIC COMMENTS

Section 2.2, Current Operations, Pages 5 and 6

1. The second paragraph in this section details current manufacturing processes and support operations at the BMSMC facility. Expand the text to indicate that the Tank Farm is located at the North Tank Farm (SWMU 3a) and that the one remaining RCRA-permitted liquid hazardous waste storage tank (Tank T-901) is located at the Hazardous Waste Management Facility (HWMF). Revise Figure 2 to show the location of these active facility features, and to note that the Brule Incinerator was formerly located at the HWMF.

Section 3.2.2, FTF Area Soil Assessment, Page 12

2. Footnote 8 indicates that total petroleum hydrocarbon – gasoline range organics (TPH-GRO) and total petroleum hydrocarbons – diesel range organics (TPH-DRO) results were compared to the TPH (Aromatic Low) and TPH (Aromatic Medium) RSLs, respectively. However, because the Aliphatic Medium RSLs are lower than the Aromatic Medium RSLs, that set should be used for comparison with the TPH-DRO results. Revise the RAR and its conclusions accordingly, and ensure that any changes in the scope of potential COCs is accurately represented in the SAPs for Phase 1 and 2A.

Section 3.3.2, Brule Soil Assessment, Page 15

3. Footnote 11 lists several potential COCs that would be eliminated from further consideration if a dilution attenuation factor (DAF) of 20 was applied to the protection of groundwater screening level. The DAF represents the reduction in concentration that occurs as soil leachate moves through soil and groundwater, and contaminant mass is adsorbed, degraded, and diluted by clean groundwater. While it may be appropriate to consider application of a DAF later as part of risk evaluation, we believe that it is inadvisable to restrict the target analyte list at this time. We further note that BMSMC has retained these potential COCs for further investigation (as per Table 14) and will confirm that these potential COCs are addressed in the SAP upon receipt. These COCs should not be eliminated without EPA approval.

Section 4.3, Building 3 (SWMU 19), Page 18

4. For consistency with Table 15, this section should be clarified to note that two salty hazardous wastewater tanks (T-1245 and T-1226) were stored outside Building 3 and within a concrete containment dike.

Section 4.4, Building 5 (SWMU 20), Page 19

5. There appears to be some inconsistency with regard to dates of operation between the text of this section and Table 15. Confirm and clarify when various process wastewater storage features were used at Building 5.

Section 4.6, Former Tank Farm Area (SWMU 3), Page 19

6. The first sentence in this section indicates that operations at the Former Tank Farm were discontinued in 1989, but Table 15 puts the shut down in 1990. Confirm the correct date, and correct the RAR accordingly.

Section 4.7, North Tank Farm (SWMU 3a), Page 20

7. The second paragraph in this section suggests that between 1980 and 2007, only methylene chloride and kerosene were stored at the Tank Farm. The text goes on to state that two diesel tanks were then installed in 2012. However, Table 15 indicates that diesel tank V-2419 was in operation in this location from 1980 to 2012. Confirm the dates of operation, and correct the RAR accordingly.

Section 5.0, Summary and Conclusions, Page 24

8. BMSMC recommends that only 1,4-dioxane and naphthalene be reported for SW-846 Method 8270D-Selective Ion Monitoring (SIM). EPA believes it is premature to limit the analyte list at 1-4 dioxane and naphthalene this time. As such this conclusion should be deleted. This issue is discussed further in EPA's September 2016 comments on BMSMC's March and June 2016 Sampling and Analysis Plans for Phases 1 and 2A, respectively.

9. According to Footnote 17, only samples collected from the Building 5 Area will be tested for pesticides. Although Table 14 identifies pesticides as potential new COCs only for that area, the RAR does not explain why pesticide exceedances were limited to this location. Further discussion should be provided with regard to historic and current pesticide usage and storage on the property.

Table 3, Additional Hazardous Constituents Detected in Soil Gas

10. Revise the third footnote to refer to soil gas screening levels, rather than groundwater screening levels. This same change should also be made in the third footnote to Table 8.

Table 4, Additional Hazardous Constituents Detected in Indoor Air

11. Revise the third footnote to refer to indoor air screening levels, rather than soil screening levels. This same change should also be made in the second footnote to Table 9.

Table 14, Summary of Hazardous Constituents Present Above Screening Levels

12. For completeness, this table should be expanded to include all current COCs. For the Former Tank Farm, this table should include acetone, chloromethane, and methyl isobutyl ketone (MIBK). For the Building 5 Area, this table should include acetone, methanol, and MIBK.

13. A footnote should be added to this table to clarify that soil gas and indoor air quality data were unavailable for reassessment with regard to the Former Brule Incinerator. Without such a footnote, these media appear to be of no concern at SWMU 9.

Table 15, Characteristics of Storage, Use, and Management Areas for Potential New COCs

14. The sixth row on page 11 of 12 should be revised to correctly refer to kerosene storage in tank T-2403.

Figure 3, Storage, Use and Management Areas That Historically Contained Potential New COCs

15. In accordance with the information provided in Section 4.0 (page 17) and on Table 15, amend this figure to highlight Building 10 in pink.